

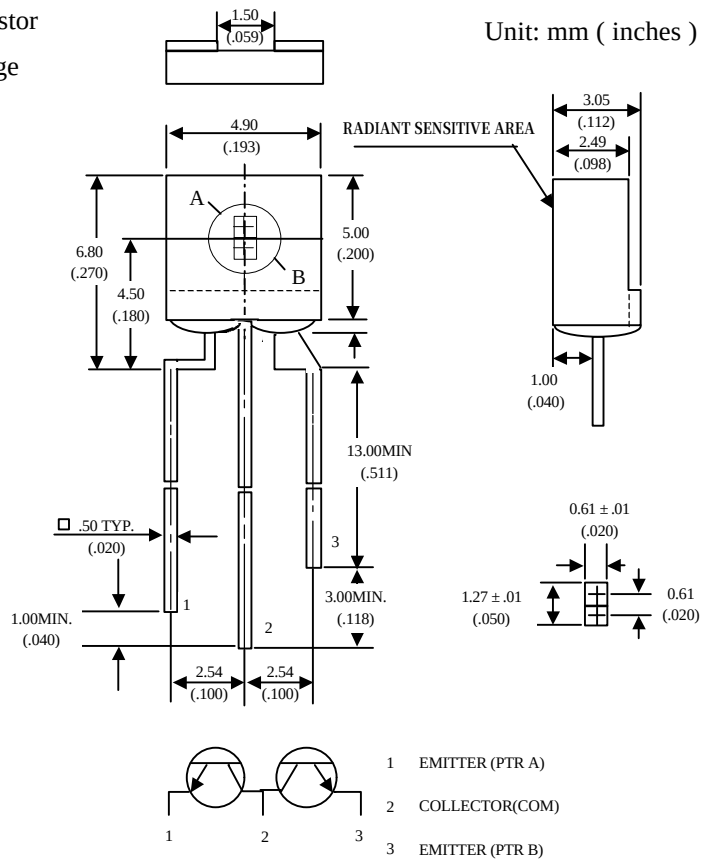
# SIDE LOOK PACKAGE NPN PHOTOTRANSISTOR

**MID-95A3L**

## Description

The MID-95A3L is a TWIN NPN silicon phototransistor mounted in a special dark plastic side looking package and suitable for the IRED (940nm) Type.

## Package Dimensions



## Features

- Wide range of collector current
- Low cost plastic package

### NOTES :

1. All dimensions are in millimeters.(inches).
2. Tolerance is  $\pm 0.25\text{mm}$  (.010") unless otherwise noted .
3. Protruded resin under flange is 1.5mm (.059") max.
4. Specifications are subject to change without notice.
5. Roughened surface.

## Absolute Maximum Ratings

@  $T_A = 25^\circ\text{C}$

| Parameter                   | Maximum Rating                              | Unit |
|-----------------------------|---------------------------------------------|------|
| Power Dissipation           | 100                                         | mW   |
| Collector-Emitter Voltage   | 30                                          | V    |
| Emitter-Collector Voltage   | 5                                           | V    |
| Operating Temperature Range | $-55^\circ\text{C}$ to $+100^\circ\text{C}$ |      |
| Storage Temperature Range   | $-55^\circ\text{C}$ to $+100^\circ\text{C}$ |      |
| Lead Soldering Temperature  | 260 $^\circ\text{C}$ for 5 seconds          |      |

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## Optical-Electrical Characteristics

@ T<sub>A</sub>=25°C

| Parameter                            | Test Conditions                                                | Symbol               | Min. | Typ . | Max. | Unit |
|--------------------------------------|----------------------------------------------------------------|----------------------|------|-------|------|------|
| Collector-Emitter Breakdown Voltage  | I <sub>c</sub> =1mA<br>Ee=0                                    | V <sub>(BR)CEO</sub> | 30   |       |      | V    |
| Emitter-Collector Breakdown Voltage  | I <sub>e</sub> =100μA<br>Ee=0                                  | V <sub>(BR)ECO</sub> | 5    |       |      | V    |
| Collector-Emitter Saturation Voltage | I <sub>c</sub> =0.1 mA<br>Ee=0.1mW/cm <sup>2</sup>             | V <sub>CE(SAT)</sub> |      | 0.1   | 0.4  | V    |
| Rise Time                            | V <sub>R</sub> =5V, R <sub>L</sub> =1KΩ<br>I <sub>C</sub> =1mA | Tr                   |      | 10    |      | μS   |
| Fall Time                            |                                                                | Tf                   |      | 10    |      |      |
| Collector Dark Current               | V <sub>CE</sub> =10V<br>Ee=0                                   | I <sub>CEO</sub>     |      |       | 100  | nA   |
| On State Collector Current           | V <sub>CE</sub> =5V<br>Ee=0.1mW/cm <sup>2</sup>                | I <sub>C(ON)</sub>   | 0.16 | 0.4   |      | mA   |

## Typical Optical-Electrical Characteristic Curves

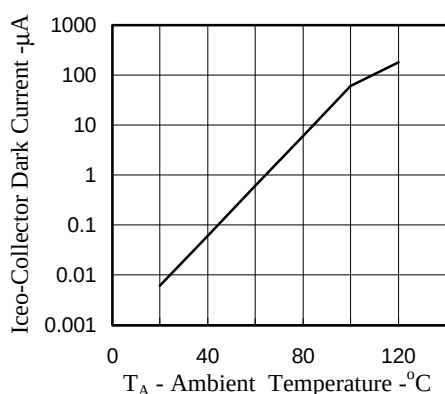


FIG.1 COLLECTOR DARK CURRENT VS AMBIENT TEMPERATURE

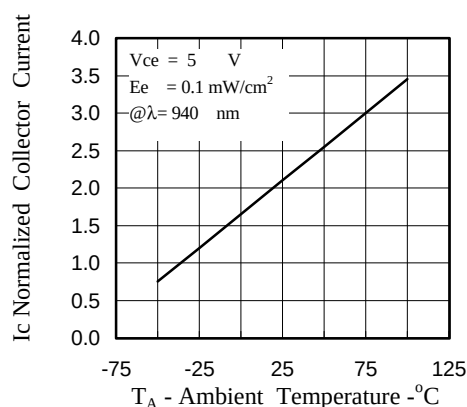


FIG.2 NORMALIZED COLLECTOR CURRENT VS AMBIENT TEMPERATURE

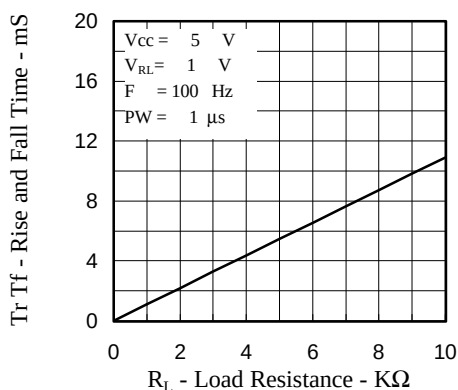


FIG.3 RISE AND FALL TIME VS LOAD RESISTANCE

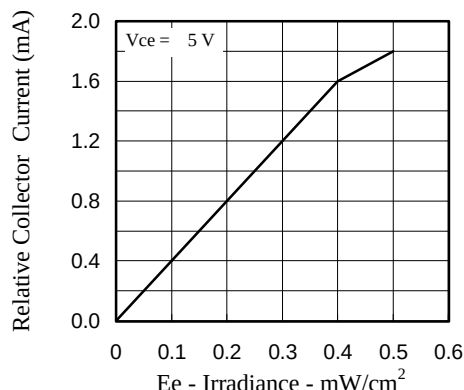


FIG.4 RELATIVE COLLECTOR CURRENT VS IRRADIANCE